60622

ER/WM&I DDT

Source/Driver (Name & Number from ISP IAG milestone Mgmt Action Corres Control etc)

Closure # (Outgoing Correspondence Control # if applicable)

Due Date

ALP
Annette L Primrose
Originator Name

12595
QA Approval

Alan M Parker
Alan M. Parker
Contractor Manager(s)

Chris Dayton
Kaiser Hill Program Manager(s)

T. G. Hedahl
Kaiser Hill Director

Document Subject KH00003NS1A

NOVEMBER 15 1995 CLEANUP STANDARDS MEETING MINUTES – AMP 168 95

November 29 1995 95 RM ER 185 KH

Discussion and/or Comments.

Attached are the meeting minutes for the above meeting If you have no questions please transmit these to the Department of Energy/Rocky Flats Field Office For corrections or concerns please contact Annette Primrose at extension 4385

cc

L	M	Brooks	K H
D	C	Shelton	K H
F	W	Chromec	RMRS
C	S	Evans	RMRS
R	Z	Houk	RMRS
J	E	Law	RMRS
A	M	Parker	RMRS
B	L	Roberts	RMRS
T	P	Lovseth	RMRS
A	L	Primrose	RMRS

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ER/WM & I DDT 7'95

NOTES ON CLEANUP STANDARDS MEETING
NOVEMBER 15, 1995

The working group developing a site wide groundwater strategy and cleanup standards for RFETS held its fifth meeting on November 15 1995 The session was mediated by personnel from Keystone and twenty six people attended

The following agenda was developed by Keystone

- introductory remarks
- information on Ryan s pit
- standards and action levels
- assignment for the next meeting and
- arrangement of the next meeting

These items form the major headings of this summary

A working sub group (Judy Bruch Chris Dayton Bill Fraser John Law Jeb Love Keith Motyl and George Setlock) was previously assigned to work on the issue of surface water standards The results from this subgroup are presented under the appropriate heading

I Introductory remarks

The minutes from the previous meeting were presented and the Keystone mediators discussed the matrix of 25 tasks which must be completed before the Rocky Flats Cleanup Agreement (RFCA) can be finalized Each task had been assigned to a working group consisting of one representative from each concerned party (EPA, Colorado DOE and Kaiser/Hill) The previously formed groundwater strategy group was tasked with determining a variety of cleanup standards according to the mediators Before December 15th 1995 this group must identify the cleanup standards to be applied and must specify where and how the standards will be applied December 11th is the deadline to allow results to feed into negotiations

II Information on Ryan's Pit

The working group requested additional information on the cleanup of Ryan s Pit during the previous meeting Zeke Houk Rocky Mountain Remediation Services (RMRS) Project Manager for the removal action provided that information Ryan s Pit is located southeast of the industrial area and south of the 903 Pad It was named in honor of Ed Ryan the manager of the paint shop who used the pit to dispose of paint shop waste until its closure in 1972

RMRS conducted a removal action last September to deal with the pit The contaminated soil and waste generated in this removal action currently are sitting in covered roll off boxes in OU 2 and will be thermally desorbed before it is returned to the pit A

modification to the RCRA operating permit has recently been approved and a thermal desorption unit will be brought onsite for the treatment. The pit currently is sitting open and fenced

The removal action was performed with personnel under supplied air Post excavation confirmation samples were collected following an approved sampling plan once the excavation was completed The sampling was performed in level D personnel protection following appropriate health and safety screening All confirmation samples were below the soil removal levels proposed by the working group except those collected from a localized area near the south wall of the pit where drums of free liquids were encountered during excavation The confirmation samples from the south wall (samples 304 and 305) contained fairly high levels of VOCs TCE is greater than the soil value calculated to protect groundwater at 100 times the MCL Attachment 1 lists the preliminary results of the confirmation samples taken after remediation of the trench These results have not been reviewed and are for discussion purposes only

If the source removal levels proposed by the working group had been in place at the time of the Ryan s Pit removal action the boundaries of the excavation would have been extended as one sample is above the proposed levels In the future field gas chromatograph will still be used to direct excavation and remove contamination (within practical limits) While measures will be use to maximize the usefulness of source removal excavation will continue to have limitations even with the best measures There are limits to the practicality of excavating plumes in water saturated soils and in unstable soils

III. Standards and Action Levels

IIIA Source Removal Standards

The working group deferred a decision on source removal levels during the last meeting pending a discussion of the cleanup of Ryan s Trench and the moderator requested a decision on this point EPA found the proposal acceptable with a change to state that excavation into the groundwater would be decided on a case by case basis

The CDPHE finds point #5 of the proposal confusing and requested clarification This clause was intended to apply to isolated detections of COCs above action levels which do not appear to contribute to groundwater contamination and which could not be excavated practically The wording of the statement will be revised to better reflect this purpose

The CDPHE commented that the soil removal levels based on 100 times MCLs are planning levels which are simply the level required for source control It is unclear how far the sources will be chased in the field and where residual contamination remains additional action may be required Susan Evans of RMRS will re write the proposal to reflect the consensus views and this draft will be circulated for review by all parties

IIIB Groundwater Point of Compliance and Standards

DOE RFFO presented a proposal for specific actions to deal with groundwater contamination (Attachment 2) This proposal was in response to the CDPHE s

suggestion that additional flexibility might be available on the issues of points of compliance and compliance standards under certain conditions The DOE proposal included a combination of source removals additional source control actions (if necessary) and specific actions for the dilute dissolved phase plumes impinging surface water The CDPHE discussed possible problems with passive treatment systems Such systems would have to be engineering for freezing weather and other site conditions

CDPHE then stated that there was no additional flexibility on point of compliance and numerical standards but there is flexibility in how the point of compliance and numerical standards are applied The standards for example could be applied either as RCRA requirements or as other standards and it may be possible to use some term other than point of compliance for the issue

The CDPHE suggested that groundwater standards equal surface water standards and questioned the wisdom of capturing the distal portions of plumes near the streams CDPHE stated that the most cost effective measures for groundwater cleanup are those implemented near the source and felt that it is difficult and expensive to deal actively with dissolved phase plumes at some distance from the source

The CDPHE suggested that the groundwater effort focus on the sources of contamination and proposed a possible two tiered approach to compliance with action levels for near term cleanup and long term compliance levels Full compliance with the standards would be a long term goal but areas exceeding some higher trigger level would be aggressively remediated The trigger could be 100 time MCLs or some other standard but there was resistance to the use of PPRGs in this way The CDPHE also suggested that installing large slurry walls to deal with dissolved phase plumes would not be wise and stated again that capture near the source is the best strategy

The concept of triggers and point of compliance were developed further Site wide triggers are a possibility and such triggers could mean a site wide point of compliance An exceedance of the trigger levels would set off an evaluation of possible actions (including source removal) Monitoring will probably be required for a number of years under any scheme and it may take a number of years for the plumes to reach the final standards Actions focused on the sources of the plumes however will allow plumes to attenuate without replenishment and will eventually be successful There seemed to be a consensus that if a source removal action was taken that the distal end of the plume could be allowed to naturally attenuate without additional action

Groundwater compliance could be judged with a combination of compliance wells and evaluation (or early warning) wells The compliance wells would be used to gauge the ultimate success of groundwater cleanup and the early warning wells would be used to gauge the advance or retreat of plumes Wells for both purposes were suggested at the previous meeting by a working sub group and the working sub group will reassemble to consider this issue in more detail (Chris Dayton Kaiser Hill has the lead on this and the group will meet Monday morning November 20 at Interlocken)

Groundwater standards should equal surface water standards according to the CDPHE but the standards to be used have not been determined definitively A general analysis of pathways will be required to support any levels which are chosen to protect surface water The Keystone staff captured the ideas advanced by the CDPHE during the meeting (Attachment 3)

IIIC Surface Water Standards

The working sub group on surface water standards presented results from the session The sub group made considerable progress but was deadlocked on the issue of radioactive COCs until the EPA offered a possible compromise Radioactive contaminants remain contentious but agreement was approached on non radioactive COCs RMRS presented a proposal for radioactive COCs to the full groundwater group (Attachment 4) The proposal included

- the proposed MCL for plutonium of 0 62 pCi/l
- a design goal for pond management of 0 05 pCi/l and
- the $1x10^{-6}$ level for open space use of 141 pCi/l

The CDPHE expressed some concerns with these risk based levels The $1x10^{-6}$ residential risk based level (stated to be approximately 0 15 pCi/l in the meeting) should apply to all water in the creeks The warm water ecological segment 2 standards and recreational exposure also apply in the creeks but the issue of point of compliance for the creeks remains undecided

The proposed MCL of 0 62 pCi/l for plutonium would be a TBC requirement under CERCLA and the site meets this standard (with a considerable safety margin) now in the creeks and ponds DOE contended that severe storms could cause these levels to be exceeded locally but the streams would serve as backup settling zones under some circumstances However CDPHE contends that the vision for the outer buffer zone clearly states that all reaches of the stream must be suitable for all uses and that particulate bound plutonium will not settle significantly in the stream

The DOE suggested that the 0 62 pCi/l standard should apply to water moving offsite but the CDPHE suggests that the vision precludes such levels at Indiana Street The CDPHE did not have enough time to prepare a counter proposal but notes that whatever proposal is developed most go through the CERCLA public involvement process According to CDPHE the Colorado Water Quality Control Commission has the authority to regulate radioactive constituents in effluent streams but the three parties should reach consensus about what makes technical sense

The CDPHE then led a discussion of possible risk based standards in the stream The possible risk based standards to protect human health vary between 0 15 and 0 60 pCi/l and the point of compliance should be in the stream Drinking water standards may be restricted to the outer Buffer Zone but the CDPHE suggests that much of the discussion of elevated plutonium was hypothetical because plutonium levels in these water bodies

have always been extremely low and will continue to be less than any proposed risk based number

There was further discussion about the terminal ponds as a point of compliance DOE made it clear that there is no intent to negotiate these in order to allow for sloppiness in remediation or D&D The DOE plans to manage the A and B series ponds in the long term and cleanup and regulation of the ponds for unrestricted use would not be justified

IV Other Actions

Concerning the other actions assigned to the cleanup standards group EPA stated that it will be impossible for the working group to develop a surface water management plan by December 15 1995 The issue of no further action will also be conceptual and probably cannot be finalized The best which can be hoped for is agreement on the basic issues and goals of surface water management and no further action The issue of OU consolidation may be agreed on prior to the mid December deadline Kaiser Hill mentioned that the water management and no further action issues are being handled by other working groups

V Assignments

The point of compliance working sub group will reconvene to deal further with this issue Susan Evans will re write the proposal for standards for subsurface soils to be reviewed by all parties The CDPHE will prepare a risk based counter proposal for the radioactive standard for surface water Annette Primrose will prepare a draft of the group s consensus opinion for a two tiered approach to groundwater

VI Next Meeting

The next meeting will be Wednesday 22 November from 8 30 to 12 30 downtown in the EPA conference center

Table 1 List of attendees

Name	Organization	Phone/Fax
Todd Barker	Keystone	534-7395/(970)262 0152
Ravi Batra	DOE	966 9664/966 7447
Laura Brooks	KH ER/WM&I	966 6130/966 6406
Norma Castaneda	DOE EP	966-4226/966 4871
Win Chromec	RMRS	966 4535/966 7193
Chris Dayton	KH ER/WM&I	966 9887/966 5001
Susan Evans	RMRS	966 3199/966 9173
Bill Fraser	EPA	312 6580
Tom Greengard	SAIC	273 1253/279 5525
Purna Halder	DOE	966 9718/966 4728
Zeke Houk	RMRS	966 3148
Gary Kleeman	EPA	312 6571/312 6897
John Law	RMRS	966-4842/966 2623
Jeb Love	CDPHE	692 3511/782 4969
Tim Lovseth	RMRS	966 8249/966 7193
Richard Marty	Jason Associates	430 1710/430 1906
Elizabeth Pottorff	CDPHE/WQCD	692 3586/782 0390
Annette Primrose	RMRS	966-4375/966 2623
Tim Rehder	EPA	312 7102/312 6897
Tim Reeves	SAIC	273 1250
Barry Roberts	RMRS	966-4530
Joe Schieffelin	CDPHE	692 3356/759 5355
Steve Slaten	DOE	966-4839/966 4728
Carl Spreng	CDPHE	692 3358/759/5355
Robert W Terry	CDPHE/Rad Control	692 3051/782 5083
Susan Wilcox	Keystone	534 7395/(970)262 0152

Attachment 1 Information Concerning Ryan s Pit

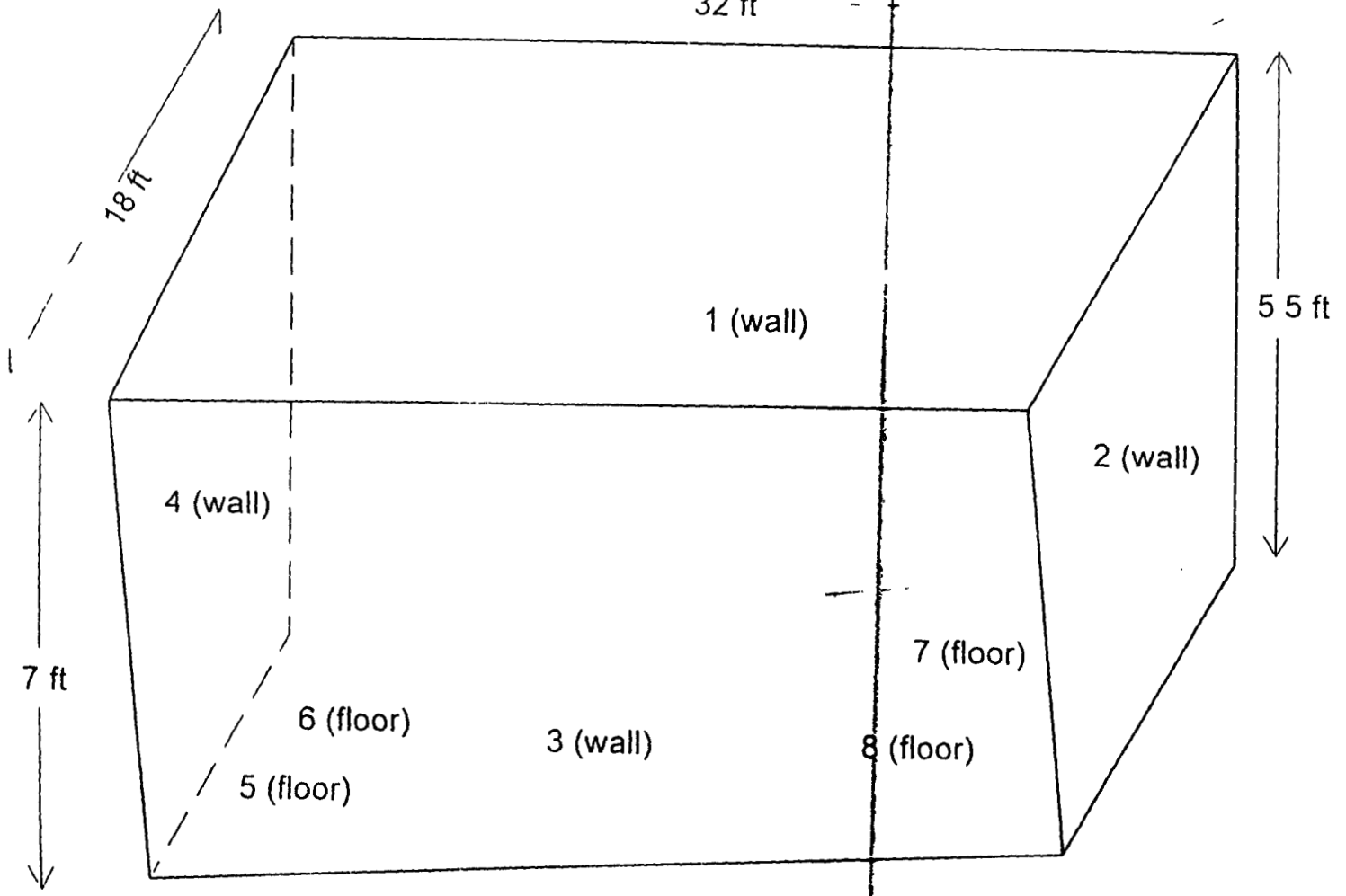
Attachment 2 Specific Groundwater Proposed Actions

Attachment 3 Keystone synthesis of groundwater point of compliance issues

Attachment 4 Surface water proposal

Preliminary Ryan's Pit Data

Looking North



Lab number	Location	Analyte	Result ppm	C	Open Space PPRG 10 6	ppm MCL	ppm 100 X MCL	of the PPRG	of the MCLx100
A639901	N wall	1 1 1 TRICHLOROETHANE		U		3 78	378		
A639901	N wall	1 1 DICHLOROETHENE		U	2 24	0 119	11 9		
A639901	N wall	1 2 DICHLOROETHANE		U	4170	0 063	6 33		
A639901	N wall	1 2 DICHLOROETHENE		U	11 1	0 095	9 51		
A639901	N wall	CARBON TETRACHLORIDE		U	13 5	0 11	11		
A639901	N wall	ETHYLBENZENE		U	85600	17 6	1760		
A639901	N wall	METHYLENE CHLORIDE		U	122		0		
A639901	N wall	TOLUENE		U	126000	20 4	2040		
A639901	N wall	TRICHLOROETHENE		U	134	0 093	9 27		
A639901	N wall	XYLENE		U	1740000	296	29600		
A640001	E wall	1 1 1 TRICHLOROETHANE		U		3 78	378		
A640001	E wall	1 1 DICHLOROETHENE		U	2 24	0 119	11 9		
A640001	E wall	1 2 DICHLOROETHANE		U	4170	0 063	6 33		
A640001	E wall	1 2 DICHLOROETHENE		U	11 1	0 095	9 51		
A640001	E wall	CARBON TETRACHLORIDE		U	13 5	0 11	11		
A640001	E wall	CHLOROFORM		U	197	1 52	152		
A640001	E wall	ETHYLBENZENE		U	85600	17 6	1760		
A640001	E wall	XYLENE		U	1740000	296	29600		
A640101	S wall	1 1 1 TRICHLOROETHANE		U		3 78	378		
A640101	S wall	1 1 DICHLOROETHENE		U	2 24	0 119	11 9		
A640101	S wall	1 2 DICHLOROETHANE		U	4170	0 063	6 33		
A640101	S wall	1 2 DICHLOROETHENE		U	11 1	0 095	9 51		
A640101	S wall	CARBON TETRACHLORIDE		U	13 5	0 11	11		
A640101	S wall	METHYLENE CHLORIDE		U	122		0		
A640101	S wall	TETRACHLOROETHENE		U	35 2	0 115	11 5		
A640101	S wall	TOLUENE		U	126000	20 4	2040		
A640101	S wall	XYLENE		U	1740000	296	29600		
A640201	W wall	1 2 DICHLOROETHENE		U	11 1	0 095	9 51		
A640201	W wall	CARBON TETRACHLORIDE		U	13 5	0 11	11		
A640201	W wall	CHLOROFORM		U	197	1 52	152		
A640201	W wall	ETHYLBENZENE		U	85600	17 6	1760		
A640201	W wall	METHYLENE CHLORIDE		U	122		0		
A640201	W wall	TETRACHLOROETHENE		U	35 2	0 115	11 5		
A640201	W wall	TOLUENE		U	126000	20 4	2040		
A640201	W wall	XYLENE		U	1740000	296	29600		
A640301	SW floor	1 DICHLOROETHENE		U	2 24	0 119	11 9		
A640301	SW floor	1 2 DICHLOROETHANE		U	4170	0 063	6 33		
A640301	SW floor	1 2 DICHLOROETHENE		U	11 1	0 095	9 51		
A640301	SW floor	CARBON TETRACHLORIDE		U	13 5	0 11	11		
A640301	SW floor	CHLOROFORM		U	197	1 52	152		
A640301	SW floor	METHYLENE CHLORIDE		U	122		0		
A640301	SW floor	TRICHLOROETHENE		U	134	0 093	9 27		
A640301	SW floor	XYLENE		U	1740000	296	29600		
A640401	NW floor	1 1 DICHLOROETHENE		U	2 24	0 119	11 9		
A640401	NW floor	1 2 DICHLOROETHENE		U	11 1	0 095	9 51		
A640401	NW floor	CARBON TETRACHLORIDE		U	13 5	0 11	11		
A640401	NW floor	CHLOROFORM		U	197	1 52	152		
A640401	NW floor	ETHYLBENZENE		U	85600	17 6	1760		
A640401	NW floor	METHYLENE CHLORIDE		U	122		0		
A640401	NW floor	TOLUENE		U	126000	20 4	2040		
A640401	NW floor	XYLENE		U	1740000	296	29600		

Lab number	Location	Analyte	Result ppm	C	Open Space PPRG 10 6	MCL	100 X MCL	% of th PPRG	cr 'n MCLx100
A640501	NE floor	1 1 1 TRICHLOROETHANE		U		3 78	378		
A640501	NE floor	1 1 DICHLOROETHENE		U	2 24	0 119	11 9		
A640501	NE floor	1 2 DICHLOROETHANE		U	4170	0 063	6 33		
A640501	NE floor	1 2 DICHLOROETHENE		U	11 1	0 095	9 51		
A640501	NE floor	ACETONE		U	25600		0		
A640501	NE floor	CARBON TETRACHLORIDE		U	13 5	0 11	11		
A640501	NE floor	CHLOROFORM		U	197	1 52	152		
A640501	NE floor	ETHYLBENZENE		U	85600	17 [illegible]	1760		
A640501	NE floor	METHYLENE CHLORIDE		U	122		0		
A640601	SE floor	1 1 1 TRICHLOROETHANE		U		3 78	378		
A640601	SE floor	1 1 DICHLOROETHENE		U	2 24	0 119	1 9		
A640601	SE floor	1 2 DICHLOROETHENE		U	11 1	0 095	9 51		
A640601	SE floor	ACETONE		U	25o00		0		
A640601	SE floor	CARBON TETRACHLORIDE		U	13 5	0 11	11		
A640601	SE floor	CHLOROFORM		U	197	1 52	152		
A640601	SE floor	TOLUENE		U	126000	20 4	2040		
A640601	SE floor	TRICHLOROETHENE		U	134	0 093	9 27		
A640601	SE floor	XYLENE		U	1740000	296	29600		
A640701	NW wall	1 1 1 TRICHLOROETHANE		U		3 78	378		
A640701	NW wall	1 1 DICHLOROETHENE		U	2 24	0 119	11 9		
A640701	NW wall	1 2 DICHLOROETHANE		U	4170	0 063	6 33		
A640701	NW wall	ETHYLBENZENE		U	85600	17 6	1760		
A640701	NW wall	METHYLENE CHLORIDE		U	122		0		
A640701	NW wall	TETRACHLOROETHENE		U	35 2	0 115	11 5		
A640701	NW wall	TOLUENE		U	126000	20 4	2040		
A640701	NW wall	TRICHLOROETHENE		U	134	0 093	9 27		
A640801	SW wall	1 1 DICHLOROETHENE		U	2 24	0 119	11 9		
A640801	SW wall	1 2 DICHLOROETHANE		U	4170	0 063	6 33		
A640801	SW wall	1 2 DICHLOROETHENE		U	11 1	0 095	9 51		
A640801	SW wall	ACETONE	0 002	BJ	25o00			0%	
A640801	SW wall	ACETONE	0 003	BJ	25o00			0%	
A640801	SW wall	CARBON TETRACHLORIDE		U	13 5	0 11	11		
A640801	SW wall	CHLOROFORM		U	197	1 52	152		
A640801	SW wall	TETRACHLOROETHENE	0 002	J	35 2	0 115	11 5	0%	0
A640801	SW wall	TETRACHLOROETHENE	0 003	J	35 2	0 115	11 5	0%	0%
A640801	SW wall	TRICHLOROETHENE	0 002	J	134	0 093	9 27	0%	0%
A640801	SW wall	TRICHLOROETHENE	0 003	J	134	0 093	9 27	0%	0%
A643103	NW floor	1 1 1 TRICHLOROETHANE	0 004	J		3 78	378		0%
A643103	NW floor	1 1 1 TRICHLOROETHANE	0 007	J		3 78	378		0%
A643103	NW floor	1 2 DICHLOROETHANE	0 005	J	4170	0 063	6 33	0%	0%
A643103	NW floor	ACETONE	0 004	BJ	25600		0	0%	
A643103	NW floor	ACETONE	0 028	B	25600		0	0%	
A643103	NW floor	TETRACHLOROETHENE	0 013		35 2	0 115	11 5	0%	0%
A643103	NW floor	TETRACHLOROETHENE	0 014		35 2	0 115	11 5	0%	0%
A643103	NW floor	TETRACHLOROETHENE	0 01		35 2	0 115	11 5	0%	0%
A643103	NW floor	TRICHLOROETHENE	0 004	J	134	0 093	9 27	0%	0%
A643103	NW floor	TRICHLOROETHENE	0 009	J	134	0 093	9 27	0%	0%
A643304	S wall	1 1 1 TRICHLOROETHANE	0 12	J		3 78	378		0%
A643304	S wall	1 1 1 TRICHLOROETHANE	8	J		3 78	378		2%
A643304	S wall	ACETONE	0 3	BJ	25600		0	0%	
A643304	S wall	ACETONE	4	J	25600		0	0%	

Lab number	Location	Analyte	Result ppm	C	Open Space PPRG 10 6	MCL	100 X MCL	% of the PPRG	of the MCLx100
A643304	S wall	ACETONE	5 8	B	25600		0	0%	
A643304	S wall	CHLOROFORM	0 06		197	1 52	152	0%	0
A643304	S wall	ETHYLBENZENE	0 072	J	85600	17 6	1760	0	0%
A643304	S wall	TETRACHLOROETHENE	1 2		35 2	0 115	11 5	3%	0
A643304	S wall	TOLUENE	0 23	J	126000	20 4	2040	0%	0
A643304	S wall	TRICHLOROETHENE	0 098	J	134	0 093	9 27	0%	1
A643304	S wall	TRICHLOROETHENE	1	J	134	0 093	9 27	1%	11
A643304	S wall	TRICHLOROETHENE	4	J	134	0 093	9 27	3%	43%
A643304	S wall	XYLENE	0 4	J	1740000	296	29600	0%	0%
A643305	S wall	ACETONE	11	JB	25600		0	0%	
A643305	S wall	ETHYLBENZENE	15		85600	17 6	1760	0%	1
A643305	S wall	ETHYLBENZENE	27		85600	17 6	1760	0%	2%
A643305	S wall	ETHYLBENZENE	28		85600	17 6	1760	0%	2
A643305	S wall	TETRACHLOROETHENE	110		35 2	0 115	11 5	313%	957%
A643305	S wall	TETRACHLOROETHENE	220		35 2	0 115	11 5	625%	1913
A643305	S wall	TETRACHLOROETHENE	250		35 2	0 115	11 5	710%	2174
A643305	S wall	TOLUENE	19		126000	20 4	2040	0%	1
A643305	S wall	TOLUENE	100		126000	20 4	2040	0	5
A643305	S wall	TRICHLOROETHENE	19		134	0 093	9 27	14	205%
A643305	S wall	XYLENE	130		1740000	296	29600	0%	0%
A643305	S wall	XYLENE	140		1740000	296	29600	0	0%
A643305	S wall	XYLENE	220		1740000	296	29600	0%	1%

Proposed Groundwater Remediation

Goal to protect surface water through a combination of source removals with a few low cost other remedial actions

Assumptions

VOCs are the primary concern in groundwater

Only passive treatment of dissolved phase contamination will be considered

- Hydrologic capture of VOC contaminated groundwater will be to the stream base

Source Removals Currently Planned

Funded	Trench T 2	Done
	Trench T 3	1996
	Trench T-4	1996
	IHSS 118 1 Carbon Tetrachloride Spill	1996 (Free phase recovery installed)

As Funding is Available	903 Pad
	Mound
	IHSS 119 1 (OU 1)

Containment will be evaluated where the potential to impact surface water exists after the source removals are completed when

- after source removals residuals approach 100 times MCLs subsurface soil concentrations
  there is no decreasing downgradient trend in groundwater concentrations over two years
- where pathway evaluation still indicates a threat to surface water

Discussion of Proposed Actions for Plumes

The focus is on areas where there is an impact on surface water i e where surface water PPRGs are exceeded

Plume assumed to be derived from the Carbon Tetrachloride Spill (IHSS 118 1)

containment by barriers will be evaluated

further excavation will be performed if required

- above will be based on the results of characterization planned for this year

Mound Plume where surface water PPRGs are exceeded in Walnut Creek

spring boxes or similar methodology to capture seepage prior to entering creek

passive treatment of water

Ryan s Pit where surface water PPRGs are exceeded downgradient of the trench

spring boxes or similar methodology to capture seepage prior to entering creek

- passive treatment of water

requires hydrogeologic data assessment to establish suitability and practicability

Seeps directly upgradient of Pond B 1

spring boxes or similar methodology to capture seepage prior to entering creek

passive treatment of water

requires hydrogeologic data assessment to establish suitability and practicability

MEMORANDUM

To Action Levels Task Group and Support Staff

From Todd Barker and Sarah Walen The Keystone Center

Subject Summary of key points from the November 14 1995 Surface Water Meeting

Date November 15 1995

As you are aware a subset of the Action Levels Task Group met to discuss issues specific to surface water on Tuesday November 14 1995 A summary of key issues from that discussion is provided below

Representatives from Rocky Flats presented a proposal for surface water that included surface water cleanup standards and points of compliance for surface water Key aspects of the proposals are summarized in the following recommendations

- Consistent with the Site Vision waters of the site should not be classified as water supply
- Points of compliance for surface water should be outlets of terminal ponds
- Aquatic life Warm water 2 Recreational 2
- DOE regulates radionuclides
- Site discharge standard for Pu should be 141 pCi/l
- Standard Pond Operation should be flow through

The group asked questions of clarification about the proposal and discussed the various aspects of the proposal in detail Representatives of the State said they were particularly concerned about the process for managing the affected watershed area and identifying surface water standards Critical to their concerns were the scientific basis for the method used and the standards selected Based on experience representatives of the State believe that they can provide Rocky Flats with a defensible scientific process of watershed analysis to establish appropriate surface water action level standards

- At the close of the November 15 meeting the group will meet to determine the need for an additional meeting to discuss surface water action levels and points of compliance

248\01\AL-003 SKW

Surface Water

DOE / K H / RMRS
WORKING GROUP PROPOSAL
November 15, 1995

Radionuclides

Action level for 0 62 pCi/liter is at Indiana Street and is a 30 day running average
Exceedance triggers notification and reporting to DOE EPA CDPHE and the Cities
Letter report due within ____ days and will follow NPDES notification guidance

Design goal for pond management is 0 05 pCi/liter

Internal treatment systems may have other design goals

Agreed upon minimum monitoring network

At 141 pCi/l we have Remediation Action Level (based on 10^{6} risk) and Notification

Non Radionuclides (orgs VOAs etc & metals & inorganics NH_3)

Like radionuclides assumes existing stream standards are risk based

Measurement point is at terminal ponds through completion of remediation / ASAP

After ASAP thalweg of stream is Point of Compliance

Classified uses are Aquatic Life Warm Water Recreation Class 2 and Agricultural

Consequences per current regulations